

12. (amended) A method according to Claim 11, wherein step (a) is effected within a gas tight enclosure.

Re-write Claim 18 as follows.

18. (amended) An apparatus according to Claim 10, wherein the coating is an organic material selected from the group consisting of polyethyleneglycol and methoxypolyethyleneglycol, silicone, polyimide, divinylbenzene, polyacrylate, carbon-based sorbents and ion-exchange materials.

REMARKS

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "**Version With Markings To Show Changes Made.**" Clean amended pages are also enclosed.

An Information Disclosure Statement is filed herewith under 37 CFR 1.97(c), with appropriate certification.

In paragraphs 1. and 2. of the action, the Examiner rejected Claims 1-9 and 18, under 35 U.S.C. 112, second paragraph, as being Indefinite

First, the Examiner points to the use in Claim 1 of the term "micro" volume.

However, this term is not present in Claim 1. Since the term appears in unrejected(on this basis) claim 10, the Examiner is requested to consider the following.

In claim 10, the term is used to describe the volume of solvent employed in the process of claim 10. The Examiner will appreciate that unlike conventional liquid-liquid solvent extraction processes, which employ large amounts of solvent, in the context of a solid phase extraction, a relatively small volume of solvent is used, which is a major advantage of our invention.

Accordingly, we have used the term "micro" to describe the relatively small volume of solvent, just as we used the term in connection with the (micro)extraction per se. The Examiner will also appreciate that this use of the term is consistent with the dictionary meaning of the term.

It is also pointed out that in our Specification at page 6, lines 24-25, we refer to a typical micro volume of solvent of 150 μ L.

It will this be appreciated by those skilled in the art that such "micro" or small volume of solvent, coupled with the further guidance from the Specification of a typical "micro" amount is all that is needed to reproduce the claimed process. Accordingly, the term is sufficiently clear to satisfy the requirements of the Act, and the Examiner is requested to withdraw this issue.

In Claims 7 and 18, the trademark Carbowax, has been replaced by its chemical composition.

In paragraphs 3. and 4., the Examiner further rejected Claims 1-9 and 12 under 35 U.S.C. 112, first paragraph, as lacking support in the Specification.

Specifically, exception was taken with the use of the term "means for introducing a sample..." , but no such means is taught.

This issue has been addressed by amending Claim 1 to avoid the term, and by introducing further descriptive language along the lines of the Specification at page 6, lines 19-20, pointed to by the Examiner.

Claim 12 has been amended to properly refer back to step (a) of claim 10, for clarification purposes.

In paragraphs 5. to 7., the Examiner rejected Claims 1-19, under 35 U.S.C. 103(a), as being Obvious in view of Pawliszyn.

It is emphasized that this reference is restricted to the use of physical desorption by temperature or other similar means. Examples of various physical means are described at col. 7, lines 37-41.

Also, "analytical instrument" is described at col. 2, lines 28-30. Further, the instrument is typically as "gas chromatograph or other suitable analytical instrument"(col. 4, lines 49-51). Also, at col. 7, lines 62-67 other physical desorption means are described.

There is no teaching or suggestion in the reference of using chemical desorption in the context of solid phase extraction.

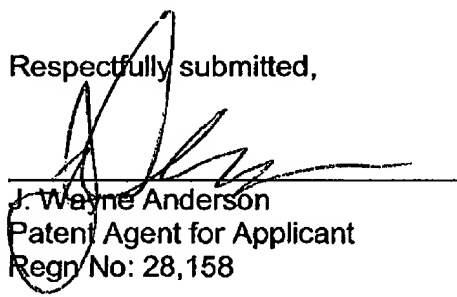
The Examiner's reference to col. 4, lines 45-50, makes no mention of a "gaseous solvent". In fact, this passage clearly refers to thermal desorption", with no mention of a solvent.

Further, the Examiner's reference to an unspecified prior art reference from col. 1, lines 50-63, is clearly a reference relating to liquid-liquid solvent extraction, and has nothing to do with the use of a solvent extraction step as part of a solid phase extraction. This is non-analogous art, so there can be no motivation to apply this knowledge to a solid phase extraction process.

The Examiner continues with a series of allegedly known facts, without providing any specific prior art basis, and using the convenient exercise of hindsight, based upon our claimed invention, to improperly conclude that our claimed invention is Obvious.

Accordingly, the Examiner is requested to withdraw this issue.

Respectfully submitted,



J. Wayne Anderson
Patent Agent for Applicant
Regn No: 28,158

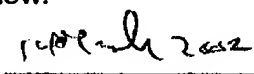
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National Research Council Canada
Intellectual Property Services Office
M-58, EG-12, Montreal Road
Ottawa, Ontario K1A 0R6 Tel: (613) 993-3899

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I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.



J. Wayne Anderson



March 14, 2002

Marked up version showing changes made

1. (amended) An apparatus for carrying out solid phase microextraction of target analytes included in a fluid or a solid sample, comprising gas tight enclosure means for receiving the sample before the enclosure is made gas tight, [means for introducing a sample including target analytes into the enclosure means, and] means located within the enclosure means for extracting the target analytes from the sample, and means located outside of the enclosure means for chemically desorbing the target analytes by solvent extraction, wherein the extraction means either samples a head space near the sample or samples the sample directly.

7. (amended) An apparatus according to Claim 4, wherein the coating is an organic material selected from the group consisting of [Carbowax ®] polyethyleneglycol and methoxypolyethyleneglycol, silicone, polyimide, divinylbenzene, polyacrylate, carbon-based sorbents and ion-exchange materials.

10. (amended) A method for solid phase micro extraction of analytes included in a fluid or a solid sample, comprising

[(c)] (a) exposing a fluid or a solid sample including target analytes, to a solid support which may be coated or uncoated, the support and/or the coating being selected based upon selectivity of the support and/or coating for at least one of the analytes in the sample, for a sufficient time to permit chemical extraction of the analytes by the support to occur, and [(d)] (b) ending said contact and then placing said solid support into a micro volume of solvent where chemical desorption of the analytes from the support occurs.

12. (amended) A method according to Claim 11, wherein [the method] step (a) is effected within a gas tight enclosure.

18. (amended) An apparatus according to Claim 10, wherein the coating is an organic material selected from the group consisting of [Carbowax[®]] polyethyleneglycol and methoxypolyethyleneglycol, silicone, polyimide, divinylbenzene, polyacrylate, carbon-based sorbents and ion-exchange materials.